UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,991	01/05/2001	James E. Flowers	CSAY-0020	4733

27964 7590 05/07/2003

HITT GAINES & BOISBRUN P.C.
P.O. BOX 832570
RICHARDSON, TX 75083

EXAMINER
CUEVAS, PEDRO J

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 0403

Application Number: 09/755,991
Filing Date: January 05, 2001
Appellant(s): FLOWERS, JAMES E.

MAILED
MAY 7 2003
GROUP 2800

Greg H. Parker
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 22, 2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 1-7 and 15-21 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,939,817	Takado	8-1999
5,786,738	Ikata et al.	7-1998
5,923,459	Filipov et al.	7-1999

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-7 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,939,817 to TAKADO in view of U.S. Patent No. 5,786,738 to IKATA et al., and further in view of U.S. Patent No. 5,923,459 to FILIPOV et al.

TAKADO discloses a module (10), comprising a hermetically-sealable shell (20) having first and second terminal sets (35a), and a lid (21), coupled to the shell and forming an enclosure of a surface acoustic wave (SAW) circuit.

IKATA et al. teaches the construction of a duplexer (71) having:

a first SAW circuit (33a), located within said shell and couplable to said first terminal set; and

a second SAW circuit (33b), located within said shell and couplable to said second terminal set, for the purpose of providing a multi-layer ceramic package with filter chips having different central frequencies.

FILIPOV et al. teaches the construction of an acusto-optic time-integrating correlator (10) having a SAW device (18) with two transducers (19 and 20) that filters a first signal (21) in a first band of communications frequencies and a second signal (22) in a second band of communications frequencies.

It would have been obvious to one skilled in the art at the time the invention was made to use the transducers disclosed by FILIPOV et al. with the duplexer arrangement disclosed by IKATA et al. on the module disclosed by TAKADO for the purpose of providing a multi-layer ceramic package with filter chips filtering two different signals, and having different central frequencies.

With regards to claims 2 and 16, IKATA et al. discloses a module wherein said first band of communications frequencies comprises a frequency between 800 and 900 megahertz as stated in column 5, lines 50-53.

With regards to claims 3 and 17, it would have been obvious to one having ordinary skill in the art at the time the invention was made to design a SAW circuit having a frequency operating range between 1800 and 1900 megahertz as the second SAW circuit of the claimed invention, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regards to claims 4 and 18, IKATA et al. discloses a module wherein said shell comprises a common base that supports said first and second SAW circuits as shown in Figure 10.

With regards to claims 5 and 19, TAKADO discloses a module comprising a lid (21) coupled to said shell to form a hermetic enclosure (as clearly stated in the abstract) that surrounds said first and second SAW circuits.

With regards to claims 6 and 20, IKATA et al. discloses a module wherein said first and second SAW circuits are located on a common piezoelectric substrate (62_3) as shown in Figure 10.

With regards to claims 7 and 21, IKATA et al. discloses a module comprising a crosstalk shield (62_2) located between said first and second SAW circuits as shown in Figure 17.

(11) Response to Argument

I. Combination of TAKADO, IKATA et al., and FILIPOV et al.

Appellant's arguments are directed to point out that the combination of TAKADO, IKATA et al., and FILIPOV et al. fails to make obvious Claims 1 and 15, and their dependent claims, because "the combination fails to teach or suggest every element of independent claims 1 and 15.", which disclose a module, comprising: a hermetically-sealable shell having first and second terminal sets; a first surface acoustic wave (SAW) circuit, located within said shell and couplable to said first terminal set, that filters signals in a first band of communications frequencies; a second SAW circuit, located within said shell and couplable to said second terminal set, that filters signals in a second band of communications frequencies; and a lid coupled to said shell and forming an enclosure that surrounds said first and second SAW circuits. The examiner respectfully disagrees with such arguments.

The examiner relies on the TAKADO reference for showing a module, comprising a hermetically-sealable shell having first and second terminal sets, and a lid coupled to the shell and forming an enclosure of a surface acoustic wave (SAW) circuit.

A SAW circuit is an electronic device used to amplify and recognize, scan visual information, and delay fast electrical signals in the form of sound waves, also called Rayleigh waves having both longitudinal and transverse (shear) components, that propagate along the surface of a solid. As one with ordinary skill in the art knows, SAW circuits are constructed to operate at specific frequencies. As with any electronic device, there is a point of operation in

which the transmission of the wave reaches an optimum level which, in the case of SAW devices in called a central frequency. There is also a range of operational points in which the SAW device works at a less than optimum level, over and under the central frequency. This range of operational or communication frequencies, also known as bandwidth is defined by The American Heritage® Dictionary of the English Language, Third Edition copyright © 1992 by Houghton Mifflin Company, as "the numerical difference between the upper and lower frequencies of a band of electromagnetic radiation, especially an assigned range of radio frequencies.".

As a direct result, any unwanted signal component having a frequency above or below the operational bandwidth of the SAW device is not transmitted by it, thus effectively filtering unwanted signal components.

The appellant points out that IKATA et al. "merely appears to teach employing parallel filter chips to split or generate a single signal (Column 1, lines 20-22), wherein the parallel filter chips have different pass-band central frequencies.".

The examiner relies on the IKATA et al. reference for showing the construction of an electronic device, in this case a duplexer, having a first SAW circuit located within said shell and couplable to said first terminal set, and a second SAW circuit, located within said shell and couplable to said second terminal set for the purpose of providing a multi-layer ceramic package with filter chips having different central frequencies. The overall operation or final result of the duplexer is not the motivation for combining the IKATA et al. reference with the TAKADO reference.

The Board's attention is directed to Column 5, lines 13-17 of IKATA et al., where chips 33*a* and 33*b* are clearly referred to as "filter chips 33*a* and 33*b*". As one with ordinary skill in

the art knows, any electric signal has multiple components which can be manipulated in order to modify the signals characteristics, such as amplitude and frequency. Multiple signals can be combined to ensure proper transmission, and then separated to their original forms for being processed. To achieve this separation, electric signals can be filtered by amplitude or by frequency. In the case of IKATA et al., the received signal is demodulated (carrier signal is discarded) to obtain the data signal, which is then, as shown in Figure 3, matched with two different frequencies to them be filtered by filter chips 33*a* and 33*b*.

The appellant points out that FILIPOV et al. "fails to cure the deficient teachings of the combination of TAKADO and IKATA et al.".

The examiner relies on the FILIPOV et al. reference for showing the use of a SAW device with two transducers that filters a first signal in a first band of communications frequencies and a second signal in a second band of communications frequencies, in this particular case, laser beams. That is, SAW device 18 contains transducers 19 and 20 which interact with signals 16 and 17. At the time the interaction is done, the input signals of transducers 19 and 20 are effectively two different signals having two different frequencies and inherently different range of operational or communication frequencies, also known as bandwidths.

The Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a

whole would suggest to one of ordinary skill in the art. In re McLaughlin, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA) 1969.

In conclusion, to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references, when combined must teach or suggest all the claimed limitations.

The examiner believes that all three basic criteria have been met. Therefore, since the arguments presented by the applicant are not considered to rebut the prima facie case of obviousness, the claims are still considered to be unpatentable.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Pedro J. Cuevas
Patent Examiner
Art Unit 2834

April 30, 2003

Conferees:

1. Olik Chadhuri

2. Nestor Ramírez

3. Pedro J. Cuevas

NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

David H. Hitt
Hitt Gaines & Boisbrun, P.C.
P.O. Box 832570
Richardson, TX 75083